

AMENDMENT

IN THE SPECIFICATION:

Please amend paragraph 66 as follows:

Alternately, a single multiple input, multiple output (MIMO) adaptive controller can be utilized rather than the two independent controls PID and LMS loops to provide faster coefficient of performance convergence and adaptation of the water temperature regulation. Simultaneously regulation of the high side outlet temperature and maximization of the coefficient of performance is accomplished using a multi-variable form of the gradient descent control and adaptation utilized to optimize the coefficient of performance discussed above. The water outlet temperature is not invariant with respect to the expansion ~~valve~~device 26, and the coefficient of performance is influenced by the rate of energy extraction in the heat rejecting heat exchanger 24.